

**DETECTION SYSTEM FOR DISK-BASED LABORATORY AND
IMPROVED OPTICAL BIO-DISC INCLUDING SAME**

ABSTRACT OF THE DISCLOSURE

5 A detection system for use in optical disk-based devices for measuring the
presence of an analyte in a sample. The detection system includes an analyte
detector unit containing a primary detector which selectively reacts with analyte
present in a sample to produce an amplification agent. The detection system
further includes an amplification unit comprising a plurality of secondary
10 detection agents which are each changeable between a negative and positive
detection state. A fluid connection is provided between the analyte detector unit
and amplification unit to provide reactive contact between the amplification agent
and the plurality of detection agents. The amplification agent is capable of
changing a plurality of detection agents between the negative and positive
detection states to thereby amplify the measurable presence of the analyte.